

**COUNTING ROOM TECHNICIAN  
JOB PERFORMANCE MEASURE****TASK CODE:** CRT-B02**TASK:** Perform Alpha Spectroscopy Preoperational Checks**NAME:** \_\_\_\_\_ **SSN:** \_\_\_\_\_

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**REFERENCES:**

1. WP 12-RL1002, Alpha Spectroscopy System Operation
2. WP 12-RL1320, Radiochemistry Laboratory Source Control

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**TERMINAL OBJECTIVE:**

Given a calibrated Alpha Spectroscopy System, perform the required preoperational checks per WP 12RL1002.

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**CONSEQUENCES OF INADEQUATE PERFORMANCE:**

Improper sample analysis  
Component damage

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**HAZARDS (PERSONNEL/EQUIPMENT STATUS):**

None

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**PRE-REQUISITE TRAINING/ TASK COMPLETION:**

1. CF 3.00 Series
2. CRT-A12, Manage Samples

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**TOOLS/EQUIPMENT (MATERIALS REQUIRED):**

1. Canberra Model 7401/7401VR/7404 Quad Alpha Spectroscopy System
2. System Logbook

**Instructions to Trainee:** You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

**Instructions to JPM Evaluator:** The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.

**KNOWLEDGE REQUIREMENTS:**

Reference	Knowledge Requirement	Pass/Fail
1	State the purpose of performing a Pulser Check.	
1	State the purpose of performing a Background Check.	
1	State how the current calibration of the Alpha Spectroscopy System is verified.	
1	Describe the information that must be logged in the system logbook.	
1	Discuss the documentation requirements upon completion of the preoperational checks.	
1	State the precautions when operating the vacuum pump.	
1	Describe the actions when instrument/detector(s) fails a preoperational check.	

**PERFORMANCE REQUIREMENTS:**

Reference	Performance Requirement	Pass/Fail
1	Operate the VAX computer and establish initial conditions for performing the Pulser Check.#	
1	Perform the Pulser Check.#	
1	Document the completion of the Pulser Check.#	
1	Operate the VAX computer and establish initial conditions for performing the Background Check.#	
1	Perform the Background Check.#	
1	Document the completion of the Background Check.#	

# indicates a critical step

**FINAL EVALUATION:**

PASS

FAIL

**COMMENTS:**

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**EVALUATOR SIGNATURE:**

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**DATE:**\_\_\_\_\_

**TRAINEE SIGNATURE:**

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**DATE:**\_\_\_\_\_

**MANAGER SIGNATURE:**

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**DATE:**\_\_\_\_\_